

What is claimed is:

- 1 1. A method for operating a plurality of stockers, comprising the steps of:  
2 monitoring utilization of the plurality of stockers, each stocker capable of storing a  
3 plurality of wafer, LCD or reticle containers;  
4 automatically transferring a first wafer, LCD or reticle container from a first one of the  
5 stockers to a second one of the stockers if the utilization of the first stocker is greater than a  
6 predetermined threshold.
- 1 2. The method of claim 1, wherein the first wafer, LCD or reticle container is automatically  
2 selected from a plurality of wafer containers based on a type of wafer lot contained within the  
3 each wafer container stored in the first stocker.
- 1 3. The method of claim 2, wherein the containers are divided into a plurality of types,  
2 including engineering lot containers, production lot containers, control wafer containers, and  
3 empty containers.
- 1 4. The method of claim 3, wherein the plurality of types are prioritized so that empty  
2 containers are moved out of the first stocker before control wafer containers, control wafer  
3 containers are moved out of the first stocker before production lot containers, and production lot  
4 containers are moved out of the first stocker before engineering lot containers.
- 1 5. The method of claim 1, wherein the first wafer, LCD or reticle container is automatically  
2 selected from a plurality of wafer, LCD or reticle containers based on a reason for placing the  
3 first wafer, LCD or reticle container in the stocker.
- 1 6. The method of claim 5, wherein:  
2 a first plurality of wafer containers contain wafer lots that are being stored between  
3 fabrication processes until required to fill an order,  
4 a second plurality of wafer containers contain wafer lots that are to be processed in  
5 equipment that is currently unavailable; and

6           wafer containers from the second plurality of containers are selected to be moved before  
7 wafer containers from the first plurality of wafers.

1       7.       The method of claim 1, wherein the first wafer, LCD or reticle container is selected based  
2 on a respective length of time that each wafer, LCD or reticle container has been stored in the  
3 first stocker.

1       8.       The method of claim 1, wherein the second stocker is automatically selected based on a  
2 priority assigned to each stocker.

1       9.       The method of claim 1, wherein the second stocker is automatically selected based on a  
2 utilization of each stocker.

1       10.      The method of claim 1, wherein the second stocker is automatically selected from one of  
2 the group consisting of a primary destination stocker and an alternate destination stocker.

1       11.      An automated material handling system, comprising :  
2           a plurality of stockers, each stocker capable of storing a plurality of wafer, LCD or reticle  
3 containers;  
4           means for monitoring utilization of the plurality of stockers;  
5           control means for causing automatic transfer of a first wafer, LCD or reticle container  
6 from a first one of the stockers to a second one of the stockers if the utilization of the first stocker  
7 is greater than a predetermined threshold.

1       12.      The system of claim 11, wherein the control means automatically select the first wafer  
2 container from a plurality of wafer containers based on a type of wafer lot contained within the  
3 each wafer container stored in the first stocker.

1       13.      The system of claim 12, wherein the control means prioritizes a plurality of container  
2 types, including engineering lot containers, production lot containers, control wafer containers,  
3 and empty containers.

1 14. The system of claim 13, wherein the plurality of container types are prioritized so that  
2 empty containers are moved out of the first stocker before control wafer containers, control  
3 wafer containers are moved out of the first stocker before production lot containers, and  
4 production lot containers are moved out of the first stocker before engineering lot containers.

1 15. The system of claim 11, wherein the first wafer, LCD or reticle container is automatically  
2 selected from a plurality of wafer, LCD or reticle containers based on a reason for placing the  
3 first wafer, LCD or reticle container in the stocker.

1 16. The system of claim 15, wherein:  
2 a first plurality of wafer containers contain wafer lots that are being stored between  
3 fabrication processes until required to fill an order,  
4 a second plurality of wafer containers contain wafer lots that are to be processed in  
5 equipment that is currently unavailable; and  
6 wafer containers from the second plurality of containers are selected to be moved before  
7 wafer containers from the first plurality of wafers.

1 17. The system of claim 11, wherein the first wafer, LCD or reticle container is selected  
2 based on a respective length of time that each wafer, LCD or reticle container has been stored in  
3 the first stocker.

1 18. The system of claim 11, wherein the second stocker is automatically selected based on a  
2 priority assigned to each stocker.

1 19. The system of claim 11, wherein the second stocker is automatically selected based on a  
2 utilization of each stocker.

1 20. The system of claim 11, wherein the second stocker is automatically selected from one of  
2 the group consisting of a primary destination stocker and an alternate destination stocker.

1 21. A computer readable medium encoded with computer program code, wherein when the  
2 computer program code is executed by a processor, the processor performs a method for  
3 operating a plurality of stockers, comprising the steps of:

4 monitoring utilization of the plurality of stockers, each stocker capable of storing a  
5 plurality of wafer, LCD or reticle containers;

6 automatically transferring a first wafer, LCD or reticle container from a first one of the  
7 stockers to a second one of the stockers if the utilization of the first stocker is greater than a  
8 predetermined threshold.

1 22. The computer readable medium of claim 21, wherein the first wafer container is  
2 automatically selected from a plurality of wafer containers based on a type of wafer lot contained  
3 within the each wafer container stored in the first stocker.

1 23. The computer readable medium of claim 22, wherein the containers are divided into a  
2 plurality of types, including engineering lot containers, production lot containers, control wafer  
3 containers, and empty containers.

1 24. The computer readable medium of claim 23, wherein the plurality of types are prioritized  
2 so that empty containers are moved out of the first stocker before control wafer containers,  
3 control wafer containers are moved out of the first stocker before production lot containers, and  
4 production lot containers are moved out of the first stocker before engineering lot containers.

1 25. The computer readable medium of claim 21, wherein the first wafer, LCD or reticle  
2 container is automatically selected from a plurality of wafer, LCD or reticle containers based on  
3 a reason for placing the first wafer, LCD or reticle container in the stocker.

1 26. The computer readable medium of claim 25, wherein:  
2 a first plurality of wafer containers contain wafer lots that are being stored between  
3 fabrication processes until required to fill an order,  
4 a second plurality of wafer containers contain wafer lots that are to be processed in  
5 equipment that is currently unavailable; and

6           wafer containers from the second plurality of containers are selected to be moved before  
7 wafer containers from the first plurality of wafers.

1   27.    The computer readable medium of claim 21, wherein the first wafer, LCD or reticle  
2 container is selected based on a respective length of time that each wafer, LCD or reticle  
3 container has been stored in the first stocker.

1   28.    The computer readable medium of claim 21, wherein the second stocker is automatically  
2 selected based on a priority assigned to each stocker.

1   29.    The computer readable medium of claim 21, wherein the second stocker is automatically  
2 selected based on a utilization of each stocker.

1   30.    The computer readable medium of claim 21, wherein the second stocker is automatically  
2 selected from one of the group consisting of a primary destination stocker and an alternate  
3 destination stocker.